TRANSACTIONS

OF THE

PHILADELPHIA ACADEMY OF SURGERY.

Stated Meeting, February 6, 1905.

The President, HENRY R. WHARTON, M.D., in the Chair.

GANGRENE OF THE SCROTUM.

DR. A. D. WHITING read a paper with the above title, for which see the ANNALS OF SURGERY for June.

DR. JOHN B. DEAVER said his experience has been limited to cases of gangrene of the scrotum due to extravasation of urine; he has never seen a case not due to this cause. They are quite common at the Philadelphia Hospital, where cases of obstruction of urine, and consequently extravasation, are numerous.

MULBERRY VESICAL CALCULUS.

DR. ADDINELL HEWSON showed a mulberry vesical calculus, together with the bladder, prostate, and penis of the subject from whom it was removed. The man was an Irishman of eighty-three years, an unmarried, illiterate laborer, and a moderate drinker. He died in a poor-house, but had complained of no symptoms whatever referable to the stone. The bladder was found thickened and ribbed, and partially embedded in the wall was the typical mulberry calculus shown. The bladder wall was also the site of two cysts. One was situated in front just above the pubis and was the size of an egg; the second was behind the prostate gland. That organ was enlarged and very firm and dense, but the middle lobe was almost free from involvement. Evidently there was but little interference with urination.

CHRONIC DUODENAL ULCER; GASTROJEJUNOSTOMY.

Dr. De Forest Willard presented a specimen removed from a man, thirty-eight years of age, who entered Dr. Musser's Service, Medical Ward, Presbyterian Hospital, on account of hæmorrhage from the bowels which had lasted for three weeks. Seven months previous he had an attack of severe pain in right upper quadrant of abdomen. He was in bed two weeks; since then has had frequent but less severe attacks of same pain, and had noticed that his stools had a tarry appearance. Present attack began three weeks before admission, with sharp pain in epigastrium radiating along right costal margin to lumbar region. Nausea, gaseous distention, retching several hours after taking food, with vomiting of small quantities of material which he described as resembling tobacco juice. Appetite poor. Emaciated; extremely pallid; red blood-corpuscles, 2,500,000; hæmoglobin, 23 per cent.; stools contain blood. Examination of gastric contents showed hyperacidity, hypersecretion, and retention; no blood. Stools showed blood. Urine negative. Physical examination, tenderness to right of epigastrium. No tumor.

Diagnosis, duodenal or gastric ulcer near pylorus; possible gall-duct obstruction. Operation following day. Median incision. Hard mass with duodenum, gall-bladder, pancreas and pylorus condensed and adherent. No signs of peritonitis. Removal impossible; anterior gastrojejunostomy with Murphy button. Patient was so profoundly anæmic, hæmoglobin 23 per cent., that additional suture of the two limbs of the bowel could not be done. Operation apparently had no effect, good or bad, and he died from exhaustion three days later with continued bleeding.

Post-mortem.—No evidences of peritonitis; no leakage from gastro-enterostomy; all stitches tight and in good position. Large duodenal ulcer just beyond the pylorus, which had perforated entirely through the coats of the bowel; but before perforation, the gall-bladder had become thoroughly adherent, so that no escape had occurred into the peritoneal cavity. This inflammatory process had thickened and condensed the gall-bladder and its ducts, so that its wall was a third of an inch in thickness and it was entirely empty. The lumen of the button was filled with soft coagula, but no leakage had occurred at the stitches.

DR. W. W. KEEN asked if examination of the blood had been made after the operation. The hæmoglobin before operation was 23 per cent., below the limit of safety as placed by von Mikulicz. Death apparently was not connected with the anæsthetic, and a blood count might have thrown further light upon the matter. The anæsthetic would reduce the hæmoglobin to some extent.

DR. E. B. HODGE, who exhibited the specimens for Dr. Willard, said no blood examination had been made after operation. Small quantities of blood were passed by the mouth and by the bowel, but the patient was more comfortable for a day or two. He then gradually failed, and died of exhaustion sixty hours after operation.

SENILE ATROPHY OF CRANIAL BONES.

DR. DE FOREST WILLARD presented the skull of a man, seventy years of age, who, after a fall down-stairs, became totally unconscious, with stertor, and slow pulse. Operation without ether, and with no signs of pain. Entire left side of skull found broken into a dozen pieces, brain crushed, and oozing from openings in dura.

This great destruction was due to the extreme thinness of the cranium, which in many places was infantile in thickness and exceedingly fragile. Many fragments, an inch square, were removed, but patient never recovered consciousness. With a skull so atrophied, a very slight injury would have caused a fracture.

AN EXPERIMENTAL AND HISTOLOGIC STUDY OF CARGILE MEMBRANE.

DRS. A. B. CRAIG and A. G. ELLIS, by invitation, read a paper with the above title, for which see the ANNALS OF SURGERY for June.

DR. W. M. L. COPLIN said the detailed experiments were to him interesting from two points of view: 1. From the purely scientific aspect of the question, and, 2, when viewed in the light of our knowledge regarding the healing in of foreign bodies. As a result of constant findings, the pathologist cannot regard a dead organized body as being other than an irritant when placed in the tissue. This is true even of isolated tissues in the body from which they are derived, detached periosteum or fragments

of bone acting as irritants to the surrounding structures. Because of this action, reintroduced tissue, in essentially every instance, is eventually absorbed and replaced by newly formed tissue. An interesting point is the method by which this absorption is accomplished. Following the studies of Metchnikoff and his school, there was a tendency to lay stress upon the action of phagocytes in the removal of the foreign body. The introduction of the celloidin capsule method of studying the effect upon bacteria of the body juices has furnished evidence, however, that lytic substances are present in the body fluids. This study of Cargile membrane appears to be the first investigation of the action of lytic substances upon foreign bodies in the tissues. Ziegler and his students have investigated the exudate cells found between embedded cover glasses, but in the experiments made by Drs. Craig and Ellis no cells could enter the capsules containing the membrane. Yet the membrane was destroyed or in process of solution, though no cellular bodies were in the fluid. In view of the question as to whether this process is a fatty degeneration, the contents of the capsules were very carefully examined for fat, but none was detected. The trend of opinion now is to look to the action of lytic substances in the destruction of irritating bodies, whether they are the cells of animals or actual foreign bodies that have been introduced. The absence of applied phagocytes in the present experiments is significant. Müller, in his studies of the absorption of teeth, and others have found the destroying cells applied to the tissue to be removed where they appear to secrete a material that destroys the tissue. Here the giant cells are not applied to the membrane; disintegration, however, is proceeding, an indication that lytic substances—possessing some of the attributes of familiar enzymes—are at work. Whether or not these substances come from the cells of the new tissue is a question at present under discussion; such origin is probable. The experiments make it clear that Cargile membrane acts as a foreign body, the chromicized and unchromicized varieties appearing to be equal in this respect. The practical application of the membrane, as to its harmful or beneficial effects upon the tissues, must of course be determined by the surgeon.

Dr. W. W. Keen said that, viewing the experiments from the practical side, the surgeon finds negative facts as important as positive results. The value of the paper lies in showing that

the confidence of surgeons in Cargile membrane is largely misplaced, as it does not prevent adhesions. Dr. Keen would like to see the experiments continued and applied to several other materials. Silver and gold leaf both have been used in the cranial cavity, and found still present after long periods of time; can they be used elsewhere? The value of thin rubber dam and gutta-percha tissue should also be tested in this regard. Finally, the elastic rubber plaster employed by Brewer in his experiments to wrap arteries requiring repair of a solution of continuity should be tried to see if it would prevent adhesions. Good results were obtained by Brewer in the case of the arteries, though Dr. Keen is not sure that microscopic studies of the tissues were made. Continued studies will probably lead to the discovery of other substances that will be efficacious and more satisfactory in preventing adhesions.

Dr. John B. Deaver said he had used Cargile membrane quite extensively, in at least fifty or sixty abdominal sections, in covering denuded surfaces, stumps after hysterectomy, etc. His attention was first called to the material by the paper of Dr. Morris. All the patients upon whom Dr. Deaver used the membrane recovered, and, as reoperation was not necessary, the effects upon the tissues could only be surmised. The recovery of these patients was as uninterrupted as in case of those upon whom the membrane was not employed. Dr. Deaver never employs the membrane to cover raw surfaces if he can obtain a peritoneal or omental graft. From the manufacturer's stand-point, the membrane employed was in every instance aseptic.

Dr. Craig, in closing, said, in regard to the recovery of patients within whose abdominal cavity Cargile membrane was employed, that the material disappeared so rapidly it would probably not interfere with recovery. He has used the membrane in dispensary practice to cover open wounds, as ulcers, and in skin-grafting after the Reverdin method, and finds it is destroyed very rapidly over the raw surfaces.

RUPTURE OF THE TENDON OF THE BICEPS FLEXOR CUBITI.

Dr. W. W. Keen presented a patient upon whom he had operated successfully for the relief of the disability caused by this accident, and read a paper upon the subject, for which see page 756.

Dr. Gwilym G. Davis said that since reporting his series of cases he had found one in a dissecting-room subject which supported the theory of the rupture of the tendon being due to disease of that structure. In the instance mentioned the tendon where it lay in the bony groove had almost entirely disappeared. Operation is indicated in cases of this injury in healthy individuals, provided they are seen early. Reasons why more cases of this injury are not operated upon are: 1. They are not seen early. 2. The disability often is comparatively slight, the other head of the muscle assuming the extra function. 3. The injury often occurs in people of rheumatic diathesis. It does not follow that severe trauma is necessary to cause rupture, as the tendon is often reduced to a mere thread. When such cases are operated upon, the tendon must be transplanted to the other head of the muscle.

Dr. Keen, in closing, said Dr. Davis's dissecting-room specimen was not subject to the criticism of specimens of supposed rupture of the muscle found in such bodies; the latter are more likely due to stretching, incident to moving the arms when rigor mortis is present, than to ante-mortem causes. In one case good results were obtained from operation three months after the injury, but if possible early operation is desirable. In cases not operated upon, the disability eventually is often quite marked. In the papers referred to are reported cases of laborers, porters, and soldiers who were rendered incompetent to perform their accustomed work. Only a few cases exhibit but little disability.